



## GOS-6112/6103/6103C (100 MHz)



GOS-6103C Without CE Approval

### FEATURES

- \* 100MHz Bandwidth, Dual Channel, Delayed Sweep
- \* Built-In 6 digits Universal Counter (GOS-6103C)
- \* 10 Sets Memory for Front Panel Setting Save & Recall (GOS-6103/GOS-6103C)
- \* Time Base Auto-range (GOS-6103/GOS-6103C)
- \* Cursor Readout with 7 Measurements
- \* Panel Setup Lock of Digital-Control Functions
- \* Buzzer Alarm
- \* LED Indicators
- \* TV Synchronization
- \* Trigger Signal Output
- \* Z-Axis Modulation Input
- \* SMD Technology, High Stability and Reliability

### CURSOR MEASUREMENT FUNCTIONS



The unique, easy-to-use cursor and numerical readouts make waveform observation and measurement easier, faster and more accurate.

The on-screen cursors provide seven measurement functions ( $\Delta V$ ,  $\Delta V\%$ ,  $\Delta VdB$ ,  $\Delta T$ ,  $1/\Delta T$ ,  $T\%$ ,  $\Delta \theta$ )

### Rear Panel



GOS-6112

The GOS-6100 Series is a 100MHz, two-channel, dual-sweep, portable oscilloscope for general purpose use. A microprocessor-based operating system controls most of the functions of the instrument, including cursor readout and digitized panel setting.

On-screen alphanumeric readout and cursor function for voltage, time, frequency and phase measurement provide extraordinary operational convenience. The advance Time Base Auto-rang function conveniently acquires waveforms at the push of button (GOS-6103/ 6103C). Ten different user defined instrument settings (GOS-6103/ 6103C) can be saved and recalled without restriction.

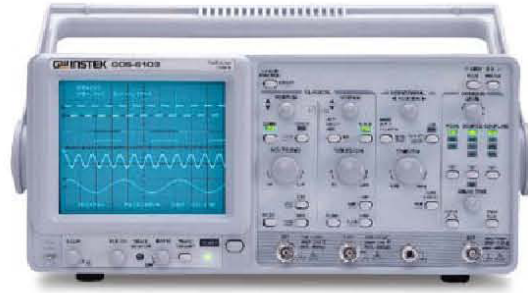
The vertical deflection system has two input channels. Each channel has 11 basic deflection factors from 2mV to 5V per division. The horizontal deflection system provides single, dual or delayed sweeps from 0.5s to 50ns per division (delayed sweep, 50ms to 50ns per division). The trigger system provides stable triggering over the full bandwidth of the vertical deflection system.

### SPECIFICATIONS

<b>CRT</b>																									
Type	6-inch rectangular type with internal graticule; 0%, 10%, 90% and 100% markers 8 x 10 div (1 div = 1 cm)																								
Accelerating Potential	16 kV approx. (GOS-6103/GOS-6103C), 12kV approx. (GOS-6112)																								
Illumination	Continuously adjustable (GOS-6103/GOS-6103C)																								
Z-axis input	Coupling : DC Sensitivity: 5V or more Maximum input voltage : 30V (DC + AC peak) at 1kHz or less Bandwidth : DC ~ 5 MHz																								
<b>VERTICAL SYSTEM</b>																									
Sensitivity	2mV~5V/div, 11 step in 1-2-5 sequence																								
Sensitivity Accuracy	±3% (5div at the center of display)																								
Vernier Vertical Sensitivity	Continuously variable to 1/2.5 or less of panel-indicate value																								
Bandwidth(-3dB)	DC~100MHz(2mV/div);DC~20MHz																								
Rise Time	3.5ns (2mV/div);17.5ns																								
Signal Delay	Leading edge can be monitored																								
Max. Input Voltage	400V(DC+AC peak) at 1kHz or less																								
Input Coupling	AC, DC, GND																								
Input Impedance	1MΩ ±2% // approx. 25pF																								
Vertical Mode	CH1,CH2,DUAL(CHOP/ALT), ADD, CH2 INV.																								
Bandwidth Limited	20MHz																								
Common-Mode Rejection Ratio	50:1 or better at 50kHz																								
Dynamic Range	8 div at 60MHz; 5div at 100MHz (GOS-6112) 8 div at 100MHz (GOS-6103/GOS-6103C)																								
<b>HORIZONTAL SYSTEM</b>																									
Horizontal Modes	MAIN(A), ALT, DELAY(B)																								
A(main) Sweep Time	50ns~0.5s/div, continuously variable (UNCAL)																								
B(delay) Sweep Time	50ns~50ms/div																								
Accuracy	±3% (±5% at x 10 MAG)																								
Sweep Magnification	x 10 (maximum sweep time 5ns/div)																								
Hold Off Time	Variable																								
Delay Time	1 μs~5s																								
Delay Jitter	Better than 1:20000																								
Alternate Separation	Variable																								
<b>TRIGGER</b>																									
Trigger Modes	AUTO, NORM,TV																								
Trigger Source	CH1,CH2,LINE,EXT																								
Trigger Coupling	AC,DC,HFR,LFR																								
Trigger Slope	"+" or "-" polarity or TVsync polarity																								
Trigger Sensitivity	<table border="1"> <thead> <tr> <th>Mode</th> <th>Frequency</th> <th>INT</th> <th>EXT</th> </tr> </thead> <tbody> <tr> <td rowspan="2">AUTO</td> <td>10 Hz ~ 20 MHz</td> <td>0.35 div</td> <td>50 mV</td> </tr> <tr> <td>20 MHz ~ 100 MHz</td> <td>1.5 div</td> <td>150 mV</td> </tr> <tr> <td rowspan="2">NORM</td> <td>DC ~ 20 MHz</td> <td>0.35 div</td> <td>50 mV</td> </tr> <tr> <td>20 MHz ~ 100 MHz</td> <td>1.5 div</td> <td>150 mV</td> </tr> <tr> <td>TV</td> <td>sync signal</td> <td>1 div</td> <td>200 mVpp</td> </tr> </tbody> </table>			Mode	Frequency	INT	EXT	AUTO	10 Hz ~ 20 MHz	0.35 div	50 mV	20 MHz ~ 100 MHz	1.5 div	150 mV	NORM	DC ~ 20 MHz	0.35 div	50 mV	20 MHz ~ 100 MHz	1.5 div	150 mV	TV	sync signal	1 div	200 mVpp
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TV sync	TV-V, TV-H																								
Max. External Input Voltage	400V(DC+AC peak ) at 1kHz																								
External Input Impedance	1M Ω ±5% // approx.25pF																								
<b>X-Y OPERATION</b>																									
Mode	X-axis: selectable CH1, CH2, EXT ; Y-axis: selectable CH1, CH2, CH1 and CH2																								
Sensitivity Accuracy	2mV~5V/div±3%; EXT : 0.1V/div ±5%																								
X-axis Bandwidth	DC~500kHz(-3dB)																								
Phase Error	3° or less from DC~50kHz																								
<b>OUTPUT SIGNAL</b>																									
Trigger Signal Output	Voltage: approx. 25mV/div into 50Ω ; Frequency response : DC ~ 10MHz																								
Calibrator Output	1kHz Square wave, 2Vpp ±2%																								



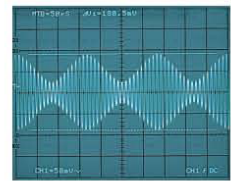
GOS-6112



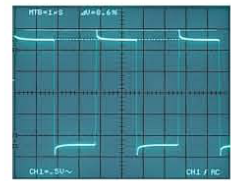
GOS-6103/6103C

SPECIFICATIONS	
<b>CURSOR READOUT FUNCTION</b>	
Cursor Measurement Function	$\Delta V, \Delta V\%, \Delta VdB, \Delta T, 1/\Delta T, \Delta T\%, \Delta \theta$
Cursor Resolution	1/100 div
Effective Cursor Range	Vertical: $\pm 3$ div; Horizontal: $\pm 4$ div
Panel Setting Display	Vertical: V/div(CH1, CH2), UNCAL, ALT/CHOP/ADD, INV, probe factor, AC/DC/GND Horizontal: s/div(MTB, DTB), UNCAL, x 10MAG, delay time, Hold-off Trigger: source, coupling, slope, level, TV-V, TV-H Others: X-Y, lock, save/recall MEM 0-9 (GOS-6103/GOS-6103C)
<b>AUTO MEASUREMENT FUNCTION (GOS-6103C)</b>	
Parameter Function	FREQ, PERIOD, $\pm$ WIDTH, $\pm$ DUTY (+ or - polarity selected by trigger slope)
Display Digits	Max. 6-digits, decimal
Frequency Range	50Hz ~ 100MHz
Accuracy	1kHz ~ 100MHz : $\pm 0.01\%$ ; 50Hz ~ 1kHz : $\pm 0.05\%$
Measuring Sensitivity	> 2 div (Measuring source selected from CH1 and CH2 as synchronous signal sources)
<b>SPECIAL FUNCTION</b>	
TIME/DIV Auto Range	Provided (GOS-6103/GOS-6103C)
Panel Setting Save & Recall	10 sets (GOS-6103/GOS-6103C)
Panel Setups Lock	Provided
<b>POWER SOURCE</b>	
AC 100V/120V/230V $\pm 10\%$ , 50/60Hz	
<b>DIMENSIONS &amp; WEIGHT</b>	
310(W) x 150(H) x 455(D) mm; Approx. 9kg	

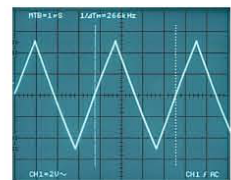
ORDERING INFORMATION	
<b>GOS-6112</b>	100MHz, 2-channel, Analog Oscilloscope
<b>GOS-6103</b>	100MHz, 2-channel, Analog Oscilloscope
<b>GOS-6103C</b>	100MHz, 2-channel, Analog Oscilloscope with 100MHz Frequency Counter
ACCESSORIES:	
User manual x 1, Power cord x 1	
GTP-100A-2: 100MHz (10 : 1/1 : 1) Switchable Passive Probe (one per channel)	
<b>OPTIONAL ACCESSORIES</b>	
<b>GTC-001</b>	Instrument Cart, 450(W) x 430(D) mm (120V Input Socket)
<b>GTC-002</b>	Instrument Cart, 330(W) x 430(D) mm (120V Input Socket)
<b>GTL-110</b>	Test Lead, BNC-BNC Heads



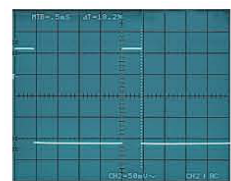
Voltage Measurement



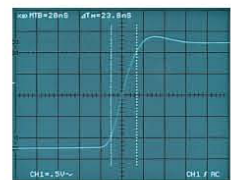
Voltage Percentage Measurement



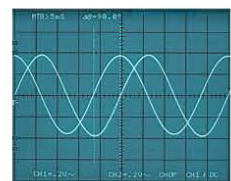
Frequency Measurement



Time Percentage Measurement



Time Measurement



Phase Measurement



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